Clinical Endocrinology

Edited by J. A. H. Wass and P. H. Bayliss

Editorial Assistant W. F. Kelly

Volume 38 1993

BLACKWELL SCIENTIFIC PUBLICATIONS
OXFORD LONDON EDINBURGH BOSTON
MELBOURNE PARIS BERLIN VIENNA

© 1993 Blackwell Scientific Publications Ltd. Authorization to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Blackwell Scientific Publications Ltd for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$10.00 per copy is paid directly to the CCC, 27 Congress Street, Salem, MA 01970, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor. 0300-0664/93/\$10.00.

Blackwell Scientific Publications
Oxford London Edinburgh Boston
Melbourne Paris Berlin Vienna

ISSN 0300-0664

Contents

Volume 38, Number 1, January 1993

- 1 Review The molecular genetics of the multiple endocrine neoplasia syndrome: R. V. THAKKER
- 15 Commentary Risk factors for osteoporosis in men: A. C. SCANE and R. M. FRANCIS
- 17 Commentary Iodine deficiency and goitre in children in Sudan: J. H. LAZARUS
- 19 Endemic juvenile hypothyroidism in a severe endemic goitre area of Sudan: R. MORENO-REYES, M. BOELAERT, S. EL BADAWI, M. ELTOM and J. B. VANDERPAS
- 25 Effect of ¹³¹I treatment on the calcitonin response to calcium infusion in hyperthyroid patients:
 M. TZANELA, N. C. THALASSINOS, A. NIKOU,
 G. GEORGIADIS and D. PHILOKIPROU
- 29 Characterization of a novel mutant human thyroid hormone receptor in a family with hereditary thyroid hormone resistance: A. SAKURAI, T. MIYAMOTO, I. A. HUGHES and L. J. DEGROOT
- 39 Adjunctive cholestyramine therapy for thyrotoxicosis:
 B. L. SOLOMON, L. WARTOFSKY and K. D. BURMAN
- 45 The effects of TSH receptor antibodies on protein kinase C in the thyroid: J. GINSBERG and P. G. MURRAY
- 49 The early effects of radioiodine therapy for hyperthyroidism on biochemical indices of bone turnover: J. M. MACLEOD, K. C. MCHARDY, R. D. HARVEY, A. DUNCAN, I. W. REID, P. D. BEWSHER and S. P. ROBINS
- 55 Cross-sectional and longitudinal study of the pituitary-thyroid axis in patients with thalassaemia major: H. LANDAU, I. MATOTH, Z. LANDAU-CORDOVA, A. GOLDFARB, E. A. RACHMILEWITZ and B. GLASER
- 63 Increased body fat mass and decreased extracellular fluid volume in adults with growth hormone deficiency: T. ROSÉN, I. BOSAEUS, J. TÖLLI, G. LINDSTEDT and B.-Å. BENGTSSON
- 73 Transsphenoidal resection in Cushing's disease: undetectable serum cortisol as the definition of successful treatment: P. J. TRAINER, H. S. LAWRIE, J. VERHELST, T. A. HOWLETT, D. G. LOWE, A. B. GROSSMAN, M. O. SAVAGE, F. AFSHAR and G. M. BESSER

- 79 Assessment of endocrine function after transsphenoidal surgery for Cushing's disease: D. R. MCCANCE, D. S. GORDON, T. F. FANNIN, D. R. HADDEN, L. KENNEDY, B. SHERIDAN and A. B. ATKINSON
- 87 Influence of sex, age and adrenergic pathways on the growth hormone response to GHRP-6: A. PEÑALVA, M. POMBO, A. CARBALLO, J. BARREIRO, F. F. CASANUEVA and C. DIEGUEZ
- 93 The frequency and amplitude of growth hormone secretory episodes as determined by deconvolution analysis are increased in adolescents with insulin dependent diabetes mellitus and are unaffected by short-term euglycaemia: B. R. PAL, D. R. MATTHEWS, J. A. EDGE, P. E. MULLIS, P. C. HINDMARSH and D. B. DUNGER
- 101 The relationship between peripheral immunoactive inhibin, human chorionic gonadotrophin, oestradiol and progesterone during human pregnancy: S. TOVANABUTRA, P. J. ILLINGWORTH, W. L. LEDGER, A. F. GLASIER and D. T. BAIRD
- 109 Case of the Month Pituitary apoplexy and sudden blindness following the administration of gonadotrophin releasing hormone: E. A. MASSON, S. L. ATKIN, M. DIVER and M. C. WHITE
- 111 Letters to the Editors Endocrine findings in Cushing's disease: A. BREW ATKINSON and J. LINDHOLM

Volume 38, Number 2, February 1993

- 113 Review Analytical and clinical significance of peptide hormone heterogeneity with particular reference to growth hormone and luteinizing hormone in serum: S. L. JEFFCOATE
- 123 Current therapy Care for the infertile male:
 E. NIESCHLAG
- 135 Commentary Parathyroid hormone related protein: D. A. HEATH
- 137 Five-year follow-up of growth hormone antibodies in growth hormone deficient children treated with recombinant human growth hormone: G. MASSA, M. VANDERSCHUEREN-LODEWEYCKX and R. BOUILLON

- 143 Different modes of growth hormone (GH) administration do not change GH binding protein activity in man: K. K. Y. HO, J. O. L. JORGENSEN, E. VALIONTIS, M. J. WATERS, I. A. RAJKOVIC and J. S. CHRISTIANSEN
- 149 Cholinergic control of growth hormone (GH) responses to GH-releasing hormone in insulin dependent diabetics: evidence for attenuated hypothalamic somatostatinergic tone and decreased GH autofeedback: I. S. ISMAIL, M. F. SCANLON and J. R. PETERS
- 159 Changes in pituitary response to GnRH during the luteal-follicular transition of the human mentrual cycle: I. E. MESSINIS, D. KOUTSOYIANNIS, S. MILINGOS, E. TSAHALINA, K. SEFERIADIS, D. LOLIS and A. A. TEMPLETON
- 165 Control of prolactin-secreting macroadenomas with parenteral, long-acting bromocriptine in 30 patients treated for up to 3 years: R. HAASE, C. JASPERS, H. M. SCHULTE, I. LANCRANJAN, H. PFINGSTEN, M. ORRI-FEND, D. REINWEIN and G. BENKER
- 177 Pharmacokinetics of 1-deamino-8-D-arginine vasopressin after various routes of administration in healthy volunteers: A. FJELLESTAD-PAULSEN, P. HÖGLUND, S. LUNDIN and O. PAULSEN
- 183 Atrial natriuretic factor reduces vasopressin and angiotensin II but not the ACTH response to acute hypoglycaemic stress in normal men: G. A. WITTERT, E. A. ESPINER, A. M. RICHARDS, R. A. DONALD, J. H. LIVESEY and T. G. YANDLE
- 191 Congenital hypothyroidism: the Riyadh Military Hospital experience: M. A. MAJEED-SAIDAN, B. JOYCE, M. KHAN and H. D. HAMAM
- 197 PCR analysis and sequencing of the SRY sex determining gene in four patients with bilateral congenital anorchia: J.-M. LOBACCARO, R. MEDLEJ, P. BERTA, C. BELON, R.-B. GALIFER, J.-P. GUTHMANN, C. CHEVALIER, P. CZERNICHOW, R. DUMAS and C. SULTAN
- 203 Self-administered subcutaneous human menopausal gonadotrophin for the stimulation of testicular growth and the initiation of spermatogenesis in hypogonadotrophic hypogonadism: T. H. JONES and J. F. DARNE
- 209 Efficacy of low dose purified FSH in ovulation induction following pituitary desensitization in polycystic ovarian syndrome: H. M. BUCKLER, H. O. CRITCHLEY, J. A. CANTRILL, S. M. SHALET, D. C. ANDERSON and W. R. ROBERTSON

- 219 Hyperinsulinaemia in the polycystic ovary syndrome confirmed with a specific immunoradiometric assay for insulin: G. S. CONWAY, P. M. S. CLARK and D. WONG
- 223 Book reviews
- 225 Notices

Volume 38, Number 3, March 1993

- 227 Rapid communication Identification of a novel mutation in the gene encoding the β-triiodothyronine receptor in a patient with apparent selective pituitary resistance to thyroid hormone: A. J. MIXSON, J. C. RENAULT, S. RANSOM, D. L. BODENNER and B. D. WEINTRAUB
- 235 Commentary Thyroid hormone resistance syndromes—are generalized and selective pituitary resistance part of the same disorder?:
 J. A. FRANKLYN
- 237 Rapid communication Impaired thermoregulation in adults with growth hormone deficiency during heat exposure and exercise: A. JUUL, A. BEHRENSCHEER, T. TIMS, B. NIELSEN, J. HALKJÆR-KRISTENSEN and N. E. SKAKKEBÆK
- 245 Blood pressure and the renin-angiotensin-aldosterone system in children receiving recombinant human growth hormone: J. S. BARTON, P. C. HINDMARSH, M. A. PREECE and C. G. D. BROOK
- 253 Influence of spontaneous or induced puberty on the growth promoting effect of treatment with growth hormone in girls with Turner's syndrome: G. MASSA, M. MAES, C. HEINRICHS, M. VANDEWEGHE, M. CRAEN and M. VANDERSCHUEREN-LODEWEYCKX
- 261 A role for life events in the pathogenesis of Cushing's disease: N. SONINO, G. A. FAVA and M. BOSCARO
- 265 Elevated plasma 19-hydroxyandrostenedione levels in Cushing's disease: stimulation with ACTH and inhibition with metyrapone: T. MUNE, H. MORITA, K. YASUDA, M. MURAYAMA, N. YAMAKITA and K. MIURA
- 273 Screening for thyroid diseases in an iodine sufficient area with sensitive thyrotrophin assays, and serum thyroid autoantibody and urinary iodide determinations: N. KONNO, K. YURI, H. TAGUCHI, K. MIURA, S. TAGUCHI, K. HAGIWARA and S. MURAKAMI

- 283 Bone mineral density in patients with hyperthyroidism measured by dual energy X-ray absorptiometry: M. WAKASUGI, R. WAKAO, M. TAWATA, N. GAN, K. KOIZUMI and T. ONAYA
- 287 Molecular forms of parathyroid hormone-related protein in tumours and biological fluids: S. J. BOWDEN, S. V. HUGHES and W. A. RATCLIFFE
- 295 The relation between clinical manifestations of polycystic ovary syndrome and β-cell function: R. F. A. WEBER, T. D. PACHE, M. L. JACOBS, R. DOCTER, D. L. LORIAUX, B. C. J. M. FAUSER and J. C. BIRKENHÄGER
- 301 Inhibin and follicle-stimulating hormone levels in gonadotroph adenomas: evidence of a positive correlation with tumour volume in men: N. LAHLOU, E. LE NESTOUR, P. CHANSON, D. SERET-BÉGUÉ, P. BOUCHARD, M. ROGER and A. WARNET
- 311 Serum FSH bioactivity and response to acute gonadotrophin releasing hormone (GnRH) agonist stimulation in patients with polycystic ovary syndrome (PCOS) as compared to control groups: C. MÉCHAIN, I. CÉDRIN, C. PANDIAN and A. LEMAY
- 321 Endothelin-1 receptors in the human myometrium: evidence for different binding properties in postmenopausal as compared to premenopausal and pregnant women: E. SCHIFF, G. BEN-BARUCH, R. GALRON, S. MASHIACH and M. SOKOLOVSKY
- 325 Polycystic ovaries are a common finding in untreated female to male transsexuals: A. H. BALEN, M. E. SCHACHTER, D. MONTGOMERY, R. W. REID and H. S. JACOBS
- 331 Case of the Month A case of papillary carcinoma of the thyroid with more than 30 years long-term asymptomatic pulmonary metastases:
 M. MARUYAMA, A. SUGENOYA, S. KOBAYASHI, H. MASUDA, T. SHIMIZU and F.IIDA
 Commentary I. DONIACH

Volume 38, Number 4, April 1993

- 337 Current therapy Treatment of hyperlipidaemia: G. R. THOMPSON
- 343 Commentary Pregnancy, hCG, thyrotoxicosis and hyperemesis gravidarum: J. H. LAZARUS
- 345 Gestational thyrotoxicosis and hyperemesis gravidarum: possible role of hCG with higher stimulating activity: M. KIMURA, N. AMINO, H. TAMAKI, E. ITO, N. MITSUDA, K. MIYAI and O. TANIZAWA

- 351 Commentary Methods for the detection of testosterone abuse in athletes: M. J. WHEELER
- 353 Determination of urinary testosterone and epitestosterone during pubertal development: a cross-sectional study in 141 normal male subjects:
 E. RAYNAUD, M. AUDRAN, J. CH. PAGÈS, C. FÉDOU, J. F. BRUN, J. L. CHANAL and A. ORSETTI
- 361 The International Standard for Thyroxine Binding Globulin: A. F. BRISTOW, R. E. GAINES-DAS, N. BUTTRESS, J. R. GALLIMORE, G. A. TENNENT and M. B. PEPYS
- 367 Age and gender influence the severity of thyroidassociated ophthalmopathy: a study of 101 patients attending a combined thyroid-eye clinic: P. PERROS, A. L. CROMBIE, J. N. S. MATTHEWS and P. KENDALL-TAYLOR
- 373 The relationship between endogenous testerone and gonadotrophin secretion: N. A.BRIDGES, P. C. HINDMARSH, P. J. PRINGLE, D. R. MATTHEWS and C. G. D. BROOK
- 379 The relationship between hCG and relaxin secretion in normal pregnancies vs peri-implantation spontaneous abortions: D. R. STEWART, J. W. OVERSTREET, A. C. CELNIKER, D. L. HESS, J. R. CRAGUN, S. P. BOYERS and B. L. LASLEY
- 387 The hypothalamo-pituitary-adrenal axis across the normal menstrual cycle and in polycystic ovary syndrome: P. M. STEWART, R. PENN, R. HOLDER, A. PARTON, J. G. RATCLIFFE and D. R. LONDON
- 393 The effects of oxandrolone on the growth hormone and gonadal axes in boys with constitutional delay of growth and puberty: A. MALHOTRA, E. POON, W.-Y. TSE, P. J. PRINGLE, P. C. HINDMARSH and C. G. D. BROOK
- 399 Growth hormone releasing hormone priming increases growth hormone secretion in patients with Cushing's syndrome: A. LEAL-CERRO, A. PUMAR, F. VILLAMIL, R. ASTORGA, C. DIEGUEZ and F. F. CASANUEVA
- 405 Potentiation of the classic ovine corticotrophin releasing hormone stimulation test by the combined administration of small doses of lysine vasopressin: C. FAVROD-COUNE, M. C. RAUX-DEMAY, M. F. PROESCHEL, X. BERTAGNA, F. GIRARD and J. P. LUTON
- 411 Malignant prolactinoma with extracranial metastases: a report of three cases: J. D. WALKER, A. GROSSMAN, J. V. ANDERSON, E. UR, P. J. TRAINER, J. BENN, C. LOWY, P. H. SÖNKSEN, P. N. PLOWMAN, D. G. LOWE, I. DONIACH, J. A. H. WASS and G. M. BESSER

- 421 Rapid communication Prenatal diagnosis of congenital adrenal hyperplasia by direct detection of mutations in the steroid 21-hydroxylase gene: G. RUMSBY, J. W. HONOUR and C. RODECK
- 427 Rapid communication The effects of growth hormone on protein metabolism in adult growth hormone deficient patients: D. L. RUSSELL-JONES, A. J. WEISSBERGER, S. B. BOWES, J. M. KELLY, M. THOMASON, A. M. UMPLEBY, R. H. JONES and P. H. SÖNKSEN
- 433 Case of the Month Coincidental occurrence of primary hyperparathyroidism and cancer-associated hypercalcaemia in a middle-aged man:
 S. J. GALLACHER, W. D. FRASER,
 M. A. FARQUHARSON, F. C. LOGUE, C. MCARDLE,
 I. T. BOYLE, E. R. NAIRN and A. M. MCNICOL
- 439 Letters to the Editors
- 441 Book reviews
- 443 Notices

Volume 38, Number 5, May 1993

- 445 Review Diabetic renal disease and its prevention:
 P. L. DRURY and P. J. WATKINS
- 451 Commentary Fine-tuning of thyroxine replacement therapy: A. D. TOFT
- 453 Thyroxine replacement therapy and circulating lipid concentrations: J. A. FRANKLYN, J. DAYKIN, J. BETTERIDGE, E. A. HUGHES, R. HOLDER, S. R. JONES and M. C. SHEPPARD
- 461 Commentary New uses for an old peptide: desmopressin and Cushing's syndrome: A. GROSSMAN
- 463 The desmopressin stimulation test in the differential diagnosis of Cushing's syndrome: D. A. MALERBI, B. B. MENDONÇA, B. LIBERMAN, S. P. A. TOLEDO, M. C. M. CORRADINI, M. B. CUNHA-NETO, M. C. B. V. FRAGOSO and B. L. WAJCHENBERG
- 473 Induction of testicular growth and spermatogenesis by pulsatile, intravenous administration of gonadotrophin-releasing hormone in patients with hypogonadotrophic hypogonadism: H. A. DELEMARRE-VAN DE WAAL
- 481 Physiological oestradiol administration does not change the biological to immunological ratio of LH in serum from post-menopausal women; H. M. BUCKLER, C. ROTHWELL, S. HOLLIS and W. R. ROBERTSON

- 487 Luteinizing hormone regulation by sex steroids in men with germinal and Leydig cell tumours: Y. REZNIK, M. RIEU, J. M. KUHN, J. C. MANDARD, P. BOTTET, D. LEMONNIER, S. BEKKA and J. MAHOUDEAU
- 495 Presence of anti-pituitary hormone antibodies in patients with empty sella syndrome and pituitary tumours: M. MAU, T. M. PHILLIPS and R. E. RATNER
- 501 Localization of neuroendocrine tumours and insulinomas using radiolabelled somatostatin analogues, ¹²³I-Tyr-octreotide and ¹¹¹In-pentatreotide: E. URE, J. BOMANJI, S. J. MATHER, K. E. BRITTON, J. A. H. WASS, A. B. GROSSMAN and G. M. BESSER
- 507 A prospective randomized trial of levothyroxine suppressive therapy for solitary thyroid nodules: E. PAPINI, V. BACCI, C. PANUNZI, C. M. PACELLA, R. FABBRINI, G. BIZZARRI, L. PETRUCCI, V. GIAMMARCO, P. LA MEDICA, M. MASALA, M. PITARO and F. NARDI
- 515 Influence of hyperthyroidism on growth hormone secretion: R. VALCAVI, C. DIEGUEZ, M. ZINI, C. MURUAIS, F. CASANUEVA and I. PORTIOLI
- 523 Ultrasonically guided chemical parathyroidectomy in patients with primary hyperparathyroidism: a follow-up study: S. KARSTRUP, L. HEGEDÜS, and H. H. HOLM
- 531 Phaeochromocytoma in multiple endocrine neoplasia type 2A: survey of 100 cases: S. CASANOVA, M. ROSENBERG-BOURGIN, D. FARKAS, C. CALMETTES, N. FEINGOLD, H. M. HESHMATI, R. COHEN, B. CONTE-DEVOLX, P. J. GUILLAUSSEAU, C. HOUDENT, J. C. BIGORGNE, V. BOITEAU, J. CARON and E. MODIGLIANI
- 539 Case of the Month Intracranial dissemination of a macroprolactinoma: J. ASSIES, N. P. L. G. VERHOEFF, D. A. BOSCH and L. J. HOFLAND
- 547 Rapid communication Thyroxine treatment increases circulating levels of insulin-like growth factor binding protein-1: a placebo-controlled study: M. ANGERVO, M. TIIHONEN, P. LEINONEN, M. VÄLIMÄKI and M. SEPPÄLÄ
- 553 Letters to the Editors
- 555 Book reviews
- 558 Notices

Volume 38, Number 6, June 1993

- 1559 Review The pathogenesis of pituitary adenomas: A. LEVY and S. L. LIGHTMAN
- 571 The long-term efficacy of conservative surgery and radiotherapy in the control of pituitary adenomas: M. BRADA, B. RAJAN, D. TRAISH, S. ASHLEY, P. J. HOLMES-SELLORS, S. NUSSEY and D. UTTLEY
- 579 Pituitary responsiveness after administration of a GnRH agonist depot formulation: Decapeptyl CR: F. J. BROEKMANS, R. E. BERNARDUS, G. BERKHOUT and J. SCHOEMAKER
- 589 Relationships between insulin-like growth factor-1 levels and growth hormone concentrations during diurnal profiles and following oral glucose in acromegaly: R. D. DOBRASHIAN, D. J. O'HALLORAN, A. HUNT, C. G. BEARDWELL and S. M. SHALET
- 595 Pathophysiology of transient cranial diabetes insipidus during pregnancy: D. J. WILLIAMS, K. A. METCALFE, L. SKINGLE, A. I. STOCK, T. BEEDHAM and J. P. MONSON
- 601 High prolactin levels in patients with Cushing's disease without pathological evidence of pituitary adenoma: R. COMTOIS, H. BEAUREGARD, J. HARDY, F. ROBERT and M. SOMMA
- 609 The plasma ACTH, AVP, CRH, and catecholamine responses to conventional and laparoscopic cholecystectomy: R. A. DONALD, E. G. PARRY, G. A. WITTERT, M. CHAPMAN, J. H. LIVESEY, M. J. ELLIS, M. J. EVANS, T. YANDLE and E. A. ESPINER
- 617 Reversibility of hypogonadotrophic hypogonadism associated with genetic haemochromatosis: T. CUNDY, J. BUTLER, A. BOMFORD and R. WILLIAMS
- 621 Roles of LH and insulin resistance in lean and obese polycystic ovary syndrome: H. GRULET, A. C. HECART, B. DELEMER, A. GROSS, V. SULMONT, M. LEUTENEGGER and J. CARON

- 627 Effect of long-term administration of progestogen on post-menopausal bone loss: result of a two-year controlled randomized study: F. TRÉMOLLIÈRES, J. M. POUILLES and C. RIBOT
- 633 Suppression of endogenous insulin secretion regulates the rapid rise of insulin-like growth factor binding protein (IGFBP)-1 levels following acute hypoglycaemia: A. M. COTTERILL, J. M. P. HOLLY, S. AMIEL and J. A. H. WASS
- 641 Rapid communication Direct inhibition of ovarian steroidogenesis by cortisol and the modulatory role of 11β-hydroxysteroid dehydrogenase: A. E. MICHAEL, L. A. PESTER, P. CURTIS, R. W. SHAW, C. R. W. EDWARDS and B. A. COOKE
- 645 Commentary Reproduction and the shuttle: P. M. STEWART
- 647 Rapid communication Effects of 17 months treatment using recombinant insulin-like growth factor-I in two children with growth hormone insensitivity (Laron) syndrome: C. HEINRICHS, H. L. VIS, P. BERGMANN and J. P. BOURGUIGNON
- 653 Rapid communication Evidence for a single gene causing polycystic ovaries and male pattern baldness: A. H. CAREY, K. L. CHAN, F. SHORT, D. WHITE, R. WILLIAMSON and S. FRANKS
- 659 Case of the Month Documentation of parathyroid carcinoma fifteen years after resection of a parathyroid 'adenoma': S. EBNER and C. H. EMERSON

0

- 662 Commentary The pathological diagnosis of carcinoma of the parathyroid: J. F. SMITH
- 663 Book reviews
- 666 Notices
- 668 Referees
- 669 Author index
- 677 Subject index